

SEQUENCE LISTING

<110> Meyers, Rachel

<120> 21612, 21615, 21620, 21676, 33756, Novel
Human Alcohol Dehydrogenases

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<170> FastSEQ for Windows Version 3.0

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<212> PRT

<213> Homo sapiens

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Glu Glu Leu Ala Ala Glu Cys Lys Ser Ala Gly Tyr Pro Gly Thr Leu
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Ile Pro Tyr Arg Cys Asp Leu Ser Asn Glu Glu Asp Ile Leu Ser Met
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Phe Ser Ala Ile Arg Ser Gln His Ser Gly Val Asp Ile Cys Ile Asn
85 90 95
Asn Ala Gly Leu Ala Arg Pro Asp Thr Leu Leu Ser Gly Ser Thr Ser
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Gly Trp Lys Asp Met Phe Asn Val Asn Val Leu Ala Leu Ser Ile Cys
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Thr Arg Glu Ala Tyr Gln Ser Met Lys Glu Arg Asn Val Asp Asp Gly
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His Ile Ile Asn Ile Asn Ser Met Ser Gly His Arg Val Leu Pro Leu
145 150 155 160
Ser Val Thr His Phe Tyr Ser Ala Thr Lys Tyr Ala Val Thr Ala Leu
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Thr Glu Gly Leu Arg Gln Glu Leu Arg Glu Ala Gln Thr His Ile Arg
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Ala Thr Cys Ile Ser Pro Gly Val Val Glu Thr Gln Phe Ala Phe Lys
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Leu His Asp Lys Asp Pro Glu Lys Ala Ala Ala Thr Tyr Glu Gln Met
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Lys Cys Leu Lys Pro Glu Asp Val Ala Glu Ala Val Ile Tyr Val Leu
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Glu Gln Val Thr
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aca cgg gaa gcc tac cag tcc atg aag gag cgg aat gtg gac gat ggg	852					

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Ser	Thr	Pro	Ala	His	Ile	Gln	Ile	Gly	Asp	Ile	Gln	Met	Arg	Pro	Thr	
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Glu	Gln	Val	Thr	*												
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Asp Leu Ala Ser Leu Lys Ser Ile Arg Glu Phe Ala Ala Lys Ile Ile	
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gaa gag gag gag cga gtg gac att cta atc aac aac gcg ggt gtg atg	435
Glu Glu Glu Glu Arg Val Asp Ile Leu Ile Asn Asn Ala Gly Val Met	
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cgg tgc ccc cac tgg acc acc gag gac ggc ttc gag atg cag ttt ggc	483
Arg Cys Pro His Trp Thr Thr Glu Asp Gly Phe Glu Met Gln Phe Gly	
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gtt aac cac ctg ggt cac ttt ctc ttg aca aac ttg ctg ctg gac aag	531
Val Asn His Leu Gly His Phe Leu Leu Thr Asn Leu Leu Leu Asp Lys	
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ctg aaag gcc tca gcc cct tcg cgg atc atc aac ctc tcg tcc ctg gcc	579
Leu Lys Ala Ser Ala Pro Ser Arg Ile Ile Asn Leu Ser Ser Leu Ala	
90 95 100 105	
cat gtt gct ggg cac ata gac ttt gac gac ttg aac tgg cag acg agg	627
His Val Ala Gly His Ile Asp Phe Asp Asp Leu Asn Trp Gln Thr Arg	
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gct ccc tct gtg agg gag cag ccc ctc ccc aga taa cctctggagc 1057
 Ala Pro Ser Val Arg Glu Gln Pro Leu Pro Arg *
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 Gly Ile Gly Lys Gln Thr Ala Leu Glu Leu Ala Arg Arg Gly Gly Asn
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 Ile Ile Leu Ala Cys Arg Asp Met Glu Lys Cys Glu Ala Ala Ala Lys
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 Asp Ile Arg Gly Glu Thr Leu Asn His His Val Asn Ala Arg His Leu
 85 90 95
 Asp Leu Ala Ser Leu Lys Ser Ile Arg Glu Phe Ala Ala Lys Ile Ile
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 Glu Glu Glu Glu Arg Val Asp Ile Leu Ile Asn Asn Ala Gly Val Met
 115 120 125
 Arg Cys Pro His Trp Thr Thr Glu Asp Gly Phe Glu Met Gln Phe Gly
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 Val Asn His Leu Gly His Phe Leu Leu Thr Asn Leu Leu Leu Asp Lys
 145 150 155 160
 Leu Lys Ala Ser Ala Pro Ser Arg Ile Ile Asn Leu Ser Ser Leu Ala
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 His Val Ala Gly His Ile Asp Phe Asp Asp Leu Asn Trp Gln Thr Arg
 180 185 190
 Lys Tyr Asn Thr Lys Ala Ala Tyr Cys Gln Ser Lys Leu Ala Ile Val
 195 200 205
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 210 215 220
 Val Asn Ala Leu His Pro Gly Val Ala Arg Thr Glu Leu Gly Arg His
 225 230 235 240
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 245 250 255
 Phe Trp Leu Leu Val Lys Ser Pro Glu Leu Val Ala Gln Pro Ser Thr
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 Tyr Leu Ala Val Ala Glu Glu Leu Ala Asp Val Ser Gly Lys Tyr Phe
 275 280 285
 Asp Gly Leu Lys Gln Lys Ala Pro Ala Pro Glu Ala Glu Asp Glu Glu
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Ala Val Leu Leu Lys Asp Tyr Val Thr Gly Gly Ala Cys Pro Ser Lys
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gcc acc atc cct ggg aag acg gtc atc gtg acg ggc gcc aac aca ggc 684
Ala Thr Ile Pro Gly Lys Thr Val Ile Val Thr Gly Ala Asn Thr Gly
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atc ggg aag cag acc gcc ttg gaa ctg gcc agg aga gga ggc aac atc 732
Ile Gly Lys Gln Thr Ala Leu Glu Leu Ala Arg Arg Gly Gly Asn Ile
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Glu Glu Glu Arg Val Asp Ile Leu Ile Asn Asn Ala Gly Val Met Arg	
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Cys Pro His Trp Thr Thr Glu Asp Gly Phe Glu Met Gln Phe Gly Val	
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Val Ala Gly His Ile Asp Phe Asp Asp Leu Asn Trp Gln Thr Arg Lys	
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Tyr Asn Thr Lys Ala Ala Tyr Cys Gln Ser Lys Leu Ala Ile Val Leu	
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Phe Thr Lys Glu Leu Ser Arg Arg Leu Gln Gly Ser Gly Val Thr Val	
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Asn Ala Leu His Pro Gly Val Ala Arg Thr Glu Leu Gly Arg His Thr	
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ggc atc cat ggc tcc acc ttc tcc agc acc aca ctc ggc ccc atc ttc	1308
Gly Ile His Gly Ser Thr Phe Ser Ser Thr Thr Leu Gly Pro Ile Phe	
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Trp Leu Leu Val Lys Ser Pro Glu Leu Val Ala Gln Pro Ser Thr Tyr	
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Leu Ala Val Ala Glu Glu Leu Ala Asp Val Ser Gly Lys Tyr Phe Asp	
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Gly Leu Lys Gln Lys Ala Pro Ala Pro Glu Ala Glu Asp Glu Glu Val	
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gcc cgg agg ctt tgg gct gaa agt gcc cgc ctg gtg ggc tta gag gct	1500
Ala Arg Arg Leu Trp Ala Glu Ser Ala Arg Leu Val Gly Leu Glu Ala	
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Pro Ser Val Arg Glu Gln Pro Leu Pro Arg *
 325 330

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<400> 7

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 Met Leu Pro Asn Thr
 1 5
 ggg agg ctg gca gga tgt aca gtt ttt atc aca ggt gca agc cgt ggc 824
 Gly Arg Leu Ala Gly Cys Thr Val Phe Ile Thr Gly Ala Ser Arg Gly
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 att ggc aaa gct att gca ttg aaa gca gca aag gat gga gca aat att 872
 Ile Gly Lys Ala Ile Ala Leu Lys Ala Ala Lys Asp Gly Ala Asn Ile
 25 30 35
 gtt att gct gca aag acc gcc cag cca cat cca aaa ctt cta ggc aca 920
 Val Ile Ala Ala Lys Thr Ala Gln Pro His Pro Lys Leu Leu Gly Thr
 40 45 50

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Ile Tyr Thr Ala Ala Glu Glu Ile Glu Ala Val Gly Gly Lys Ala Leu	
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Pro Cys Ile Val Asp Val Arg Asp Glu Gln Gln Ile Ser Ala Ala Val	
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Glu Lys Ala Ile Lys Lys Phe Gly Gly Ile Asp Ile Leu Val Asn Asn	
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Ala Ser Ala Ile Ser Leu Thr Asn Thr Leu Asp Thr Pro Thr Lys Arg	
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Leu Asp Leu Met Met Asn Val Asn Thr Arg Gly Thr Tyr Leu Ala Ser	
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Lys Ala Cys Ile Pro Tyr Leu Lys Lys Ser Lys Val Ala His Ile Leu	
135 140 145	
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Asn Ile Ser Pro Pro Leu Asn Leu Asn Pro Val Trp Phe Lys Gln His	
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Cys Ala Tyr Thr Ile Ala Lys Tyr Gly Met Ser Met Tyr Val Leu Gly	
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Met Ala Glu Glu Phe Lys Gly Glu Ile Ala Val Asn Ala Leu Trp Pro	
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Lys Thr Ala Ile His Thr Ala Ala Met Asp Met Leu Gly Gly Pro Gly	
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Ile Glu Ser Gln Cys Arg Lys Val Asp Ile Ile Ala Asp Ala Ala Tyr	
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Ser Ile Phe Gln Lys Pro Lys Ser Phe Thr Gly Asn Phe Val Ile Asp	
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Glu Asn Ile Leu Lys Glu Glu Gly Ile Glu Asn Phe Asp Val Tyr Ala	
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Ile Lys Pro Gly His Pro Leu Gln Pro Asp Phe Phe Leu Asp Glu Tyr	
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Phe	Lys	Glu	Glu	Lys	Leu	Gln	Leu	Gln	Pro	Lys	Pro	Arg	Ser	Gly	Ala		
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Val	Glu	Glu	Thr	Phe	Arg	Ile	Val	Lys	Asp	Ser	Leu	Ser	Asp	Asp	Val		
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gtt	aaa	gcc	act	caa	gca	atc	tat	ctg	ttt	gaa	ctc	tcc	ggg	gaa	gat	1784	
Val	Lys	Ala	Thr	Gln	Ala	Ile	Tyr	Leu	Phe	Glu	Leu	Ser	Gly	Glu	Asp		
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ggg	ggc	acg	tgg	ttt	ctt	gat	ctg	aaa	agc	aag	ggg	ggg	aat	gtc	gga	1832	
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Tyr	Gly	Glu	Pro	Ser	Asp	Gln	Ala	Asp	Val	Val	Met	Ser	Met	Thr	Thr		
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gat	gac	ttt	gta	aaa	atg	ttt	tca	ggg	aaa	cta	aaa	cca	aca	atg	gca	1928	
Asp	Asp	Phe	Val	Lys	Met	Phe	Ser	Gly	Lys	Leu	Lys	Pro	Thr	Met	Ala		
	375					380					385						
ttc	atg	tca	ggg	aaa	ttg	aag	att	aaa	ggg	aac	atg	gcc	cta	gca	atc	1976	
Phe	Met	Ser	Gly	Lys	Leu	Lys	Ile	Lys	Gly	Asn	Met	Ala	Leu	Ala	Ile		
390					395					400					405		
aaa	ttg	gag	aag	cta	atg	aat	cag	atg	aat	gcc	aga	ctg	tga			2018	
Lys	Leu	Glu	Lys	Leu	Met	Asn	Gln	Met	Asn	Ala	Arg	Leu	*				
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 Val Ile Ala Thr Asp Ile Asn Glu Ser Lys Leu Gln Glu Leu Glu Lys
 35 40 45

Tyr	Pro	Gly	Ile	Gln	Thr	Arg	Val	Leu	Asp	Val	Thr	Lys	Lys	Lys	Gln
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Ile	Asp	Gln	Phe	Ala	Asn	Glu	Val	Glu	Arg	Leu	Asp	Val	Leu	Phe	Asn
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Val	Ala	Gly	Phe	Val	His	His	Gly	Thr	Val	Leu	Asp	Cys	Glu	Glu	Lys
				85					90					95	
Asp	Trp	Asp	Phe	Ser	Met	Asn	Leu	Asn	Val	Arg	Ser	Met	Tyr	Leu	Met
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Ile	Lys	Ala	Phe	Leu	Pro	Lys	Met	Leu	Ala	Gln	Lys	Ser	Gly	Asn	Ile
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Ile	Asn	Met	Ser	Ser	Val	Ala	Ser	Ser	Val	Lys	Gly	Val	Val	Asn	Arg
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Cys	Val	Tyr	Ser	Thr	Thr	Lys	Ala	Ala	Val	Ile	Gly	Leu	Thr	Lys	Ser
145					150					155					160
Val	Ala	Ala	Asp	Phe	Ile	Gln	Gln	Gly	Ile	Arg	Cys	Asn	Cys	Val	Cys
				165				170						175	
Pro	Gly	Thr	Val	Asp	Thr	Pro	Ser	Leu	Gln	Glu	Arg	Ile	Gln	Ala	Arg
			180					185					190		
Gly	Asn	Pro	Glu	Glu	Ala	Arg	Asn	Asp	Phe	Leu	Lys	Arg	Gln	Lys	Thr
		195					200					205			
Gly	Arg	Phe	Ala	Thr	Ala	Glu	Glu	Ile	Ala	Met	Leu	Cys	Val	Tyr	Leu
	210					215					220				
Ala	Ser	Asp	Glu	Ser	Ala	Tyr	Val	Thr	Gly	Asn	Pro	Val	Ile	Ile	Asp
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 Met Gly Arg Leu Asp Gly

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Lys Val Ile Ile Leu Thr Ala Ala Ala Gln Gly Ile Gly Gln Ala Ala	10	20	
gcc tta gct ttt gca aga gaa ggt gcc aaa gtc ata gcc aca gac att			750
Ala Leu Ala Phe Ala Arg Glu Gly Ala Lys Val Ile Ala Thr Asp Ile	25	35	
aat gag tcc aaa ctt cag gaa ctg gaa aag tac ccg ggt att caa act			798
Asn Glu Ser Lys Leu Gln Glu Leu Glu Lys Tyr Pro Gly Ile Gln Thr	40	50	
cggt gtc ctt gat gtc aca aag aag aaa caa att gat cag ttt gcc aat			846
Arg Val Leu Asp Val Thr Lys Lys Lys Gln Ile Asp Gln Phe Ala Asn	55	65	70
gaa gtt gag aga ctt gat gtt ctc ttt aat gtt gct ggt ttt gtc cat			894
Glu Val Glu Arg Leu Asp Val Leu Phe Asn Val Ala Gly Phe Val His	75	80	85
cat gga act gtc ctg gat tgt gag gag aaa gac tgg gac ttc tcg atg			942
His Gly Thr Val Leu Asp Cys Glu Glu Lys Asp Trp Asp Phe Ser Met	90	95	100
aat ctc aat gtg cgc agc atg tac ctg atg atc aag gca ttc ctt cct			990
Asn Leu Asn Val Arg Ser Met Tyr Leu Met Ile Lys Ala Phe Leu Pro	105	110	115
aaa atg ctt gct cag aaa tct ggc aat att atc aac atg tct tct gtg			1038
Lys Met Leu Ala Gln Lys Ser Gly Asn Ile Ile Asn Met Ser Ser Val	120	125	130
gct tcc agc gtc aaa gga gtt gtg aac aga tgt gtg tac agc aca acc			1086
Ala Ser Ser Val Lys Gly Val Val Asn Arg Cys Val Tyr Ser Thr Thr	135	140	145
aag gca gcc gtg att ggc ctc aca aaa tct gtg gct gca gat ttc atc			1134
Lys Ala Ala Val Ile Gly Leu Thr Lys Ser Val Ala Ala Asp Phe Ile	155	160	165
cag cag ggc atc agg tgc aac tgt gtg tgc cca gga aca gtt gat acg			1182
Gln Gln Gly Ile Arg Cys Asn Cys Val Cys Pro Gly Thr Val Asp Thr	170	175	180
cca tct cta caa gaa aga ata caa gcc aga gga aat cct gaa gag gca			1230
Pro Ser Leu Gln Glu Arg Ile Gln Ala Arg Gly Asn Pro Glu Glu Ala	185	190	195
cggt aat gat ttc ctg aag aga caa aag acg gga aga ttc gca act gca			1278
Arg Asn Asp Phe Leu Lys Arg Gln Lys Thr Gly Arg Phe Ala Thr Ala	200	205	210
gaa gaa ata gcc atg ctc tgc gtg tat ttg gct tct gat gaa tct gct			1326
Glu Glu Ile Ala Met Leu Cys Val Tyr Leu Ala Ser Asp Glu Ser Ala	215	220	225
			230

tat gta act ggt aac cct gtc atc att gat gga ggc tgg agc ttg tga	1374
Tyr Val Thr Gly Asn Pro Val Ile Ile Asp Gly Gly Trp Ser Leu *	
235 240 245	

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